

Sound Analytical Services, Inc.
ANALYTICAL & ENVIRONMENTAL CHEMISTS
4813 Pacific Hwy East • Tacoma, WA 98424
(253) 922-2310 • FAX (253) 922-5047
e-mail: saincl@uswest.net



TRANSMITTAL MEMORANDUM

DATE: August 23, 1999

AREAS 2, 3 & 4

TO: Jeff Winter
King County International Airport
7233 Perimeter Rd. South
Seattle, WA 98118

PROJECT: 8633 - King Co. International Airport, Seattle

REPORT NUMBER: 83557

Enclosed are the test results for fourteen samples received at Sound Analytical Services on August 20, 1999.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Tom Boyden
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name
Project Name

King County International Airport
8633 - King Co. International
Airport, Seattle
08-20-99

Date Received

General Chemistry Parameters

Client Sample ID
Lab ID

KCA-8633-9W
83557-08

Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	24

Client Sample ID
Lab ID

KCA-8633-10W
83557-09

Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	25

Client Sample ID
Lab ID

KCA-8633-11W
83557-10

Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	23

Client Sample ID
Lab ID

KCA-8633-12W
83557-11

Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	22

Client Sample ID
Lab ID

KCA-8633-13B
83557-12

Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	26

SOUND ANALYTICAL SERVICES, INC.

Client Sample ID Lab ID		KCA-8633-14S1 83557-13			
Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	24

Client Sample ID Lab ID		KCA-8633-14S2 83557-14			
Parameter	Method	Date Analyzed	Units	Result	PQL
Total Halogens (TX)	EPA 9076	08-23-99	mg/kg	ND	20

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-9W
Lab ID:	83557-08
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	85.75
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	76.4		46	150
Bromofluorobenzene	79		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.039	0.0031	
Toluene	ND	0.039	0.012	
Ethylbenzene	ND	0.039	0.0012	
m&p-Xylene	ND	0.079	0.002	
o-Xylene	ND	0.039	0.00079	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-9W - dup
Lab ID:	83557R08
Date Received:	-
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	85.75
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	81.1		46	150
Bromofluorobenzene	84.9		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.04	0.0032	
Toluene	ND	0.04	0.012	
Ethylbenzene	ND	0.04	0.0012	
m&p-Xylene	ND	0.081	0.002	
o-Xylene	ND	0.04	0.00081	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-10W
Lab ID:	83557-09
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	79.6
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	76.4		46	150
Bromofluorobenzene	78.8		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.04	0.0032	
Toluene	ND	0.04	0.012	
Ethylbenzene	ND	0.04	0.0012	
m&p-Xylene	ND	0.08	0.002	
o-Xylene	ND	0.04	0.0008	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-11W
Lab ID:	83557-10
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	83.23
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	78		46	150
Bromofluorobenzene	80.1		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.036	0.0029	
Toluene	ND	0.036	0.011	
Ethylbenzene	ND	0.036	0.0011	
m&p-Xylene	ND	0.072	0.0018	
o-Xylene	ND	0.036	0.00072	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-12W
Lab ID:	83557-11
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	88.54
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	80		46	150
Bromofluorobenzene	84.6		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.037	0.0029	
Toluene	ND	0.037	0.011	
Ethylbenzene	ND	0.037	0.0011	
m&p-Xylene	ND	0.073	0.0018	
o-Xylene	0.058	0.037	0.00073	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-13B
Lab ID:	83557-12
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/22/99
% Solids	76.45
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	71.6		46	150
Bromofluorobenzene	75		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.035	0.0028	
Toluene	ND	0.035	0.011	
Ethylbenzene	0.037	0.035	0.001	
m&p-Xylene	0.16	0.07	0.0017	
o-Xylene	0.064	0.035	0.0007	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-14S1
Lab ID:	83557-13
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/22/99
% Solids	81.63
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	79.9		46	150
Bromofluorobenzene	129		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	0.014	0.041	0.0033	J
Toluene	ND	0.041	0.013	
Ethylbenzene	0.63	0.041	0.0012	
m&p-Xylene	1.2	0.082	0.002	
o-Xylene	4.3	0.041	0.00082	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-14S2
Lab ID:	83557-14
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/22/99
% Solids	84.07
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	82.2		46	150
Bromofluorobenzene	143		62	156

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	0.0086	0.038	0.003	J
Toluene	ND	0.038	0.012	
Ethylbenzene	0.55	0.038	0.0011	
m&p-Xylene	1	0.076	0.0019	
o-Xylene	4.1	0.038	0.00076	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-16B
Lab ID:	83557-01
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/20/99
% Solids	96.66
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	78.1		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-17W
Lab ID:	83557-02
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	95.29
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	74.3		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-18W
Lab ID:	83557-03
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	88.63
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	76.5		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	13	21	

X1 - Chromatogram suggests this might be heavy oil

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-19W
Lab ID:	83557-04
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	95.97
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	74.2		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	19	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-20W
Lab ID:	83557-05
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	95.92
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	79.3		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	19	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-21W
Lab ID:	83557-06
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	96.84
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	74		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	19	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-22S
Lab ID:	83557-07
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	95.64
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	80.4		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	35	19	X1

X1 - Chromatogram suggests this might be heavy oil

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-9W
Lab ID:	83557-08
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	85.75
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	77.1		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	23	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-10W
Lab ID:	83557-09
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	79.6
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	69.6		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	23	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-11W
Lab ID:	83557-10
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	83.23
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	71.4		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	24	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-12W
Lab ID:	83557-11
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	88.54
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	78.3		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	22	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-13B
Lab ID:	83557-12
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	76.45
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	77		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	24	

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8833-14S1
Lab ID:	83557-13
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	81.63
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	76.4		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	24	23	X1

X1 - Chromatogram suggests this might be mineral spirits or similar product

SOUND ANALYTICAL SERVICES, INC.

Client Name	King County International Airport
Client ID:	KCA-8633-14S2
Lab ID:	83557-14
Date Received:	8/20/99
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	84.07
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	76.7		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	25	23	X1

X1 - Chromatogram suggests this might be mineral spirits or similar product

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Client Sample ID: KCA-8633-14S2
Lab ID: 83557-14
QC Batch Number: TX682

Method Blank

Parameter	Result (mg/kg)	PQL
Total Halogens (TX)	ND	20

Duplicate

Parameter	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD (%)	Flag
Total Halogens (TX)	ND	ND	NC	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - GB1927
Date Received:	-
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
% Solids	
Dilution Factor	1

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Trifluorotoluene	97.1		46	150
Bromofluorobenzene	99.4		62	156

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	MDL	Flags
Benzene	ND	0.04	0.0032	
Toluene	ND	0.04	0.012	
Ethylbenzene	ND	0.04	0.0012	
m&p-Xylene	ND	0.08	0.002	
o-Xylene	ND	0.04	0.0008	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	GB1927
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
QC Batch ID:	GB1927

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Benzene	0	1	1.03	103	1.14	114	10	
Toluene	0	1	1.01	101	1.14	114	12	
Ethylbenzene	0	1	0.968	96.8	1.09	109	12	
m&p-Xylene	0	2	1.84	92	2.05	102	10	
o-Xylene	0	1	0.938	93.8	1.02	102	8.4	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	KCA-8633-9W
Lab ID:	83557-08
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
QC Batch ID:	GB1927

Volatile Aromatic Hydrocarbons by USEPA Method 8021B/5030B Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Benzene	0	0	NC	
Toluene	0	0	NC	
Ethylbenzene	0	0	NC	
m&p-Xylene	0	0	NC	
o-Xylene	0	0	NC	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI2250
Date Received:	-
Date Prepared:	8/20/99
Date Analyzed:	8/20/99
% Solids	
Dilution Factor	4

Diesel by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	64.6		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	KCA-8633-22S
Lab ID:	83557-07
Date Prepared:	8/20/99
Date Analyzed:	8/21/99
QC Batch ID:	DI2250

Diesel by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	35.3	22.6	44.0	X4a

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	OH020701
Lab ID:	83538-21
Date Prepared:	8/20/99
Date Analyzed:	8/20/99
QC Batch ID:	D12250

Diesel and Motor Oil by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	0	22.2	-200.0	X4a

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	DI2250
Date Prepared:	8/20/99
Date Analyzed:	8/20/99
QC Batch ID:	DI2250

Diesel by WTPH-D Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	501	377	75.4	411	82	8.4	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

101



CHAIN OF CUSTODY RECORD

83557

Client/Project Name <i>King Co. International Airport</i>			Project Location <i>Seattle</i>			ANALYSES <i>TOX</i> <i>BTEX</i> <i>WTPH-D</i>					
Work Order No. <i>8633</i>			Field Logbook No.								
Sampler: (Signature) <i>Jim R. K. Wean</i>			Chain of Custody Tape No.								
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample							
1 <i>KCA-8633-16B</i>	<i>8/20/99</i>			<i>Composite Soil</i>							
2 <i>KCA-8633-17W</i>	<i>11</i>			<i>GRAB Soil</i>							
3 <i>KCA-8633-18W</i>	<i>11</i>			<i>GRAB Soil</i>							
4 <i>KCA-8633-19W</i>	<i>11</i>			<i>GRAB Soil</i>							
5 <i>KCA-8633-20W</i>	<i>11</i>			<i>GRAB Soil</i>							
6 <i>KCA-8633-21W</i>	<i>11</i>			<i>GRAB Soil</i>							
7 <i>KCA-8633-22S</i>	<i>11</i>			<i>Composite Soil</i>							
8 <i>KCA-8633-23W</i>	<i>11</i>			<i>GRAB Soil</i>							
Relinquished by: (Signature) <i>Ken Wean</i>			Date <i>8/20/99</i>	Time <i>1400</i>	Received by: (Signature) <i>Jim R. K. Wean</i>			Date <i>8/20/99</i>	Time <i>1400</i>		
Relinquished by: (Signature) <i>Jim R. K. Wean</i>			Date <i>8/20/99</i>	Time <i>1450</i>	Received by: (Signature) <i>L. Palmquist</i>			Date <i>8/20/99</i>	Time <i>2:50</i>		
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time		
Comments: <i>Fax Results to Jim R. K. Wean Hard Copy to Olympus</i>					ANALYTICAL LABORATORY <i>24 Hour TAT Bill King County Airport Direct</i>						

VO1



CHAIN OF CUSTODY RECORD

83557

Client/Project Name <i>King County International Airport</i>				Project Location <i>Seattle</i>				<div style="text-align: center;">ANALYSES</div> <div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TOX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">WTPH-D</div> </div>							
Work Order No. <i>8633</i>				Field Logbook No.											
Sampler: (Signature) <i>K. W. ...</i>				Chain of Custody Tape No.											
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample											
<i>9 KCA-8633-row</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
<i>10 KCA-8633-11W</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
<i>11 KCA-8633-12W</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
<i>12 KCA-8633-13B</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
<i>13 KCA-8633-14S1</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
<i>14 KCA-8633-14S2</i>	<i>8/20/99</i>			<i>GRAB / Soil</i>	<i>X</i>	<i>X</i>	<i>X</i>								
Relinquished by: (Signature) <i>[Signature]</i>				Date <i>8/20/99</i>	Time <i>1400</i>	Received by: (Signature) <i>[Signature]</i>				Date <i>8/20/99</i>	Time <i>1400</i>				
Relinquished by: (Signature) <i>[Signature]</i>				Date <i>8/20/99</i>	Time <i>1450</i>	Received by: (Signature) <i>[Signature]</i>				Date <i>8/20/99</i>	Time <i>250</i>				
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time				
Comments: <i>Fax Results to Jim Becker HARD COPY TO Olympus</i>					ANALYTICAL LABORATORY <i>24 HOUR TAT Bell King County International Airport</i>										